

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



11 DEC 2004



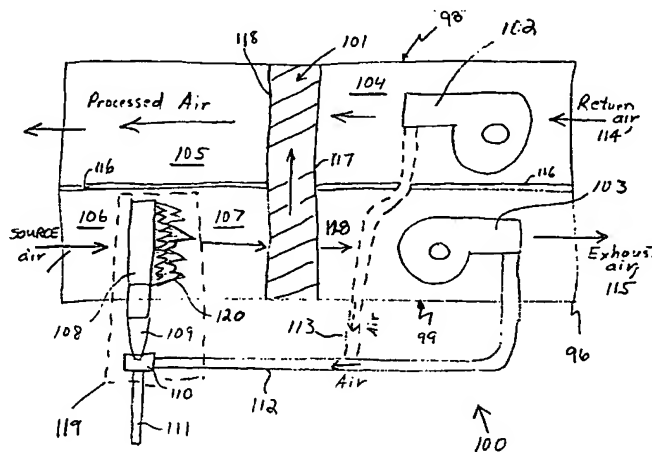
(43) International Publication Date
14 August 2003 (14.08.2003)

PCT

(10) International Publication Number
WO 2003/067156 A3

- (51) International Patent Classification⁷: F25D 17/06, 23/00
- (21) International Application Number: PCT/US2003/003729
- (22) International Filing Date: 6 February 2003 (06.02.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/354,682 6 February 2002 (06.02.2002) US
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:
— of inventorship (Rule 4.17(iv)) for US only
- Published:
— with international search report
- (88) Date of publication of the international search report: 19 February 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DESICCANT DEHUMIDIFICATION SYSTEM



(57) Abstract: A desiccant dehumidification system (DDS) uses an air heater that incorporates air feedback from the exhaust (115) and/or the return air fans (106). The air and gas are mixed in a mixing valve (110). The mixing valve (110) may be a single step, a two step or a continuous modulation valve. An outdoor cooking grill style burner (112) allows a small unit to be made with tight air heating system. One system cools the return air making it cool and humid. A portion of this air is then dried by a DDS which makes output air that is hot and dry. The remaining return air is then dried by DDS output air to deliver processed air in a controlled comfort range. A second system mixes return air with fresh air to make mixed return air which is dried in a DDS. The dried return air is then cooled to a desired comfort range without condensation.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/03729

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F25D 17/06; F25D 23/00.

US CL : 62/90, 271, 173.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 62/90, 271, 173.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,826,434 A (BELDING et al.) 27 October 1998 (27.10.1998), see entire document.	1-33
Y	US 6,199,388 B1 (FISCHER, JR.) 13 March 2001 (13.03.2001), see entire document.	1-51
A	US 6,003,327 A (BELDING et al.) 21 December 1999 (21.12.1999), see entire document.	1-14
A	US 5,667,560 A (DUNNE) 16 September 1997 (16.09.1997), see entire document.	1-23
A	US 5,649,428 A (CALTON et al.) 22 July 1997 (22.07.1997), see entire document.	1-10
A	US 5,632,954 A (COELLNER et al.) 27 May 1997 (27.05.1997), see entire document.	1-18

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

14 July 2003 (14.07.2003)

Date of mailing of the international search report

11 AUG 2003

Name and mailing address of the ISA/US

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